

WHAT IS CLAIMED IS:

1. In a system for decoding video signals received from a first source and supporting continuous bi-directional communication with said first source,
5 apparatus providing a signal interface for conditioning signals communicated between said system and said first source, comprising:

a terminal operable to receive a communication signal from said first source and for outputting a return communication signal to said first source;

10 a diplexer coupled to said terminal and operable to separate a received communication signal from a return communication signal based on different frequency bands of said received communication signal and said return communication signal;

15 a signal splitting device coupled to said diplexer and operable to split said separated received communication signal to provide first and second signals that substantially replicate said separated received communication signal; and

first and second tuners coupled to receive said first and second replicated signals from said splitting device and operable to tune to receive data being conveyed by said first and second replicated signals respectively.

20 2. The apparatus of claim 1, further comprising:

a processor, coupled to said diplexer and operable to generate said return communication signal; and

wherein said return communication signal is provided to said diplexer via a path bypassing said splitting device.

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3. The apparatus of claim 1, wherein:

said first tuner comprises a DOCSIS compatible signal, and tunes to receive said first replicated signal; and

30 said second tuner comprises at least one of (a) an analog NTCS compatible signal, and (b) an MPEG compatible signal, and tunes to receive said second replicated signal.

4. The apparatus of claim 1, further comprising:

35 a DOCSIS compatible decoder operable to decode said first replicated signal; and

at least one of (a) an analog NTSC signal compatible decoder, and (b) an MPEG compatible decoder.

5. The apparatus of claim 1, wherein:

said system decodes a video signal received from first and second sources and supports continuous bi-directional communication with said first source, said system including apparatus providing a signal interface for conditioning signals communicated between said system and said first source and operable to condition a signal received from said second source, including:

10 a switch coupled to said splitting device and said second tuner, said switch in a first position providing coupling of said second replicated signal to said second tuner, and in a second position providing isolation of said second replicated signal from said second tuner and providing coupling of said video signal received from said second source to said second tuner.

6. The apparatus of claim 5, wherein:

15 in both said switch first and second positions, said video signal received from said first source remains coupled to said first tuner.

7. The apparatus of claim 6, wherein:

20 said first tuner comprises a tuner for a DOCSIS compatible cable modem supporting continuous status polling by a CATV head end of a status of said cable modem.

8. In a system for decoding video signals received from first and second sources and supporting continuous bi-directional communication with said first source, apparatus providing a signal interface for conditioning signals received from said second source and communicated between said system and said first source, comprising:

first and second terminals operable to receive signals from said first and second sources respectively;

a signal splitting device operable to split a signal derived from a signal received by said first terminal to provide first and second signals that substantially replicate said signal derived from said signal received by said first terminal;

first and second tuners coupled to receive said first and second replicated signals from said splitting device and operable to tune to receive data being conveyed in said first and second replicated signals respectively; and

a switch coupled to said splitting device and said second tuner, said switch in a first position providing coupling of said second replicated signal to said second tuner, and in a second position providing isolation of said second replicated signal from said second tuner and providing coupling of said video signal received from said second source to said second tuner.

9. The apparatus of claim 8, further comprising:

a diplexer coupled to said first terminal and to said splitting device, and operable to separate a received communication signal from a return communication signal to provide said signal derived from said signal received by said first terminal, said separation being performed based on different frequency bands of said received communication signal and said return communication signal.

10. The apparatus of claim 8, wherein:

in both said first and second positions of said switch, said video signal received from said source remains coupled to said first tuner.

11. The apparatus of claim 8, wherein:

said first tuner comprises a DOCSIS compatible cable modem supporting continuous status polling by a CATV head end of a status of said cable modem.

12. The apparatus of claim 8, wherein:

said second tuner comprises an OpenCable compatible tuner.

13. A set top box comprising:

a first terminal operable to receive a first signal from a first source and output a return signal to said first source;

5 a diplexer coupled to said first terminal and operable to separate a received first signal from an outgoing return signal based on a difference of frequency bands of said first signal and said outgoing return signal;

a signal splitter coupled to said diplexer and operable to separate said received first signal into first and second separated signals each of which substantially replicates said received first signal;

10 a first tuner coupled to receive said first split signal and operable to tune to data conveyed in said first split signal; and

a second tuner coupled to receive said second split signal and operable to tune to data conveyed in said second split signal.

15 14. The set top box of claim 13, further comprising:

a second terminal operable to receive a second signal from a second source;

and

15 a switch coupled to said second terminal and between said splitter and said tuner, said switch in a first position providing only said second signal to said 20 second tuner, and in a second position providing only said second separated signal to said second tuner.

15 15. The set top box of claim 14, wherein said second signal is an analog television signal and said second tuner is operable to tune analog television signals.

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16. The set top box of claim 15, wherein said second tuner is operable to tune NTSC analog television signals.

17. The set top box of claim 13, wherein said first tuner comprises a DOCSIS 30 compatible tuner.

18. A method for signal processing and interface in a set top box comprising the steps of:

- receiving a signal;
- 5 diplexing said signal into a first signal band and a second signal band;
- subsequently splitting said first signal band and said second signal band to create a first and second replicated signal for conveyance to a respective first and second tuner.